



CCT Cyclic Corrosion Test Cabinets

Meet the environmental testing
requirements.

www.tqcsheen.com

The C&W Cyclic Corrosion Test Cabinets (CCT) are designed to continuously deliver the precise environmental test conditions demanded by modern industry. Their reliability, ease of operation and robust construction has led to their use worldwide in all major sectors from automotive manufacture, to the paint, plastics, packaging, electronics, aerospace, military and offshore industries.

Pioneering designs have made C&W the UK leader in the manufacture of accelerated corrosion and environmental test cabinets.

With the inclusion of C&W in TQC Sheen in 2019 it is our goal to enhance this leading position and extend the product range with all necessary tools for performing corrosion tests.



Automatic self filling humidifier system for compressed air saturation.



Internal humidification system for high humidity generation, 98% RH, with automatic level control.

Operating Modes

The C&W CCT cabinet provides a full range of environmental test conditions including:

- ✓ Conventional salt spray/ salt fog.
- ✓ High humidity, 98% RH, at constant or cyclic temperatures.
- ✓ Dry heat – ambient to 70°C.
- ✓ Dwell and ramp functions.
- ✓ Air purge cycles.
- ✓ Forced air drying.
- ✓ Ambient to 55°C +/- 1°C.

With its user-friendly programme logic controller, any one or any combination of these conditions can be selected, programmed in any sequence and for any pre-set time. CCT cabinets can also be used in single mode as the following: Cyclic Prohesion® Cabinet, CASS Cabinet, Conventional Salt Spray/ Salt Fog Cabinet, Humidity Cabinet.

Optimum Operation

Effective corrosion testing requires rapid transition between test regimes with minimum fluctuation. In C&W's CCT cabinets these criteria are assured by:

- ✓ Dry/moist air facility included.
- ✓ Sophisticated atomiser ensuring even distribution of salt spray and precise collection rates throughout the chamber.
- ✓ Fully adjustable water temperature control with digital display.
- ✓ Overheating and low water protection.
- ✓ Easy access for filling and sterilisation to prevent excessive growth of algae.
- ✓ Optional low level alarm system available.

Standards

C&W CCT cabinets conform to all leading corporate, national and international standards including:

British/ISO/EN Standards:

ISO 7253, BS 3900 F12

German Standards:

DIN 50021

American Standards:

ASTM B117

Japanese Standards:

JIS-K 5622-7

Corporate Standards:

Toyota TSH 1555G, Ford EU B 153-2, VDA 624-415, VW-1210-C, Renault, , SWAAT + Mastmaasis Honda 5100Z, GM 9540 P, Nissan M0007, CCT I, II & IV, Unichem 692 & 741.



Warranty

Subject to agreed maintenance procedures a two year warranty is available. The standard warranty is one year.



Air purge to remove corrosion air borne salt fog prior to sample inspection.



Mobile external salt solution reservoir with integral filter system. 114 litre capacity giving approximately 10 days continuous operation.

Precise Control

C&W cabinets are designed for ease of operation. All units incorporate a microprocessor controller with the capacity to hold up to 7 programmes with unlimited event entries. Rapid programme selection and the facility to create new programmes to meet specific needs, puts the operator in total control.

- ✓ Programme run cycle counter with 'End of Test' facility.
- ✓ The ability to monitor cycles, events and functions is made possible by the comprehensive package of control and display features.
- ✓ Full visual display of all events, cycles and test conditions.
- ✓ Accurate salt solution flow control via a variable speed, heavy duty peristaltic pump and flow meter. This ensures precise collection rates and eliminates atomizer blockage.
- ✓ Air regulator and gauge to control and monitor the air pressure required for precise salt spray rates.

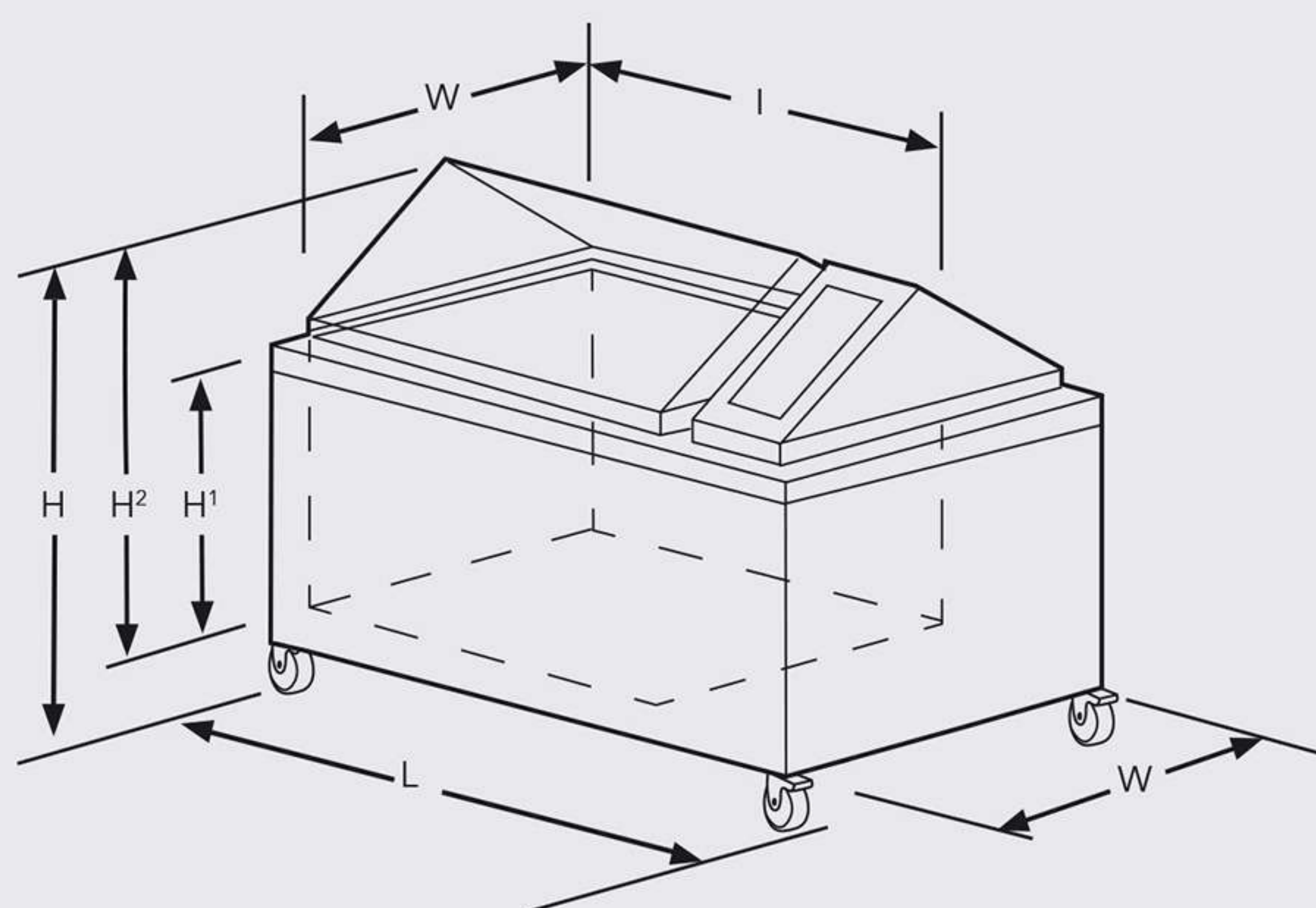
Design Benefits

CCT cabinets, with their clean, functional design are manufactured from high quality materials selected specifically for this application.

- ✓ Installation in areas of restricted access is made easier due to the compact design aided by wheels and removable lids.
- ✓ Wet or dry seal option.
- ✓ Specially formulated retardant glass reinforced polyester (GRP) with high chemical and temperature tolerance.
- ✓ Apex lids are available in a range of composite materials depending on test requirements, and supported by gas springs.
- ✓ Ergonomically designed control panel.
- ✓ Corrosion resistant construction throughout.

Technical Specifications

Models	CW1401 100 litre	CW1402 200 litre	CW1404 450 litre	CW1407 750 litre	CW1410 1000 litre	CW1420 2000 litre
External Dimensions	L	1000 mm	1030 mm	1370 mm	1740 mm	2750 mm
	W	600 mm	700 mm	930 mm	1230 mm	1220 mm
	H	645 mm	1035 mm	1115 mm	1365 mm	1630 mm
Internal Dimensions	I	600 mm	610 mm	825 mm	1120 mm	2000 mm
	W	450 mm	510 mm	635 mm	870 mm	1000 mm
	H ¹	375 mm	455 mm	620 mm	780 mm	850 mm
	H ²	565 mm	660 mm	875 mm	1070 mm	1175 mm
Panel Capacity	72	80	132	210	344	516
Power Supply Amp	13	16	16	13	32	3 Phase 380 V 50/60Hz
Style	TableTop	Floor Mounted				
Compressed Air	Type: Clean, dry, oil free Pressure: 2 to 4 bar (30 to 60 psi)		Flow: 3.5 cfm at 15 psi Connection: 10 mm ID plastic pipe			6 to 8 bar (90 to 120 psi)



Power Supply	230 V 50/60Hz single phase, other voltages on request
Water Type	De-ionised or mains water below 50mg/litre TDS
Water Pressure	2 to 4 bar (30 to 60 psi)
Water Connection	10 mm ID plastic pipe
Drain	36 mm outside diameter plastic pipe to liquid waste with air breather / vent pipe connected
Reservoir With Lid	Supplied on castors with internal solution filter 500 mm x 620 mm x 540 mm (L x W x H)

Optional Accessories

- + Low reservoir alarm.
- + External salt fog collection vessels.
- + Salt fog condenser venting system.
- + Variable humidity – 15%RH to 98%RH with controlled temperature.
- + Compressor – available for continuous use or stand-by function: high specification, oil free.
- + Compressor switch – for automatic switch-over to stand-by or regular air supply.
- + De-ioniser & water filters – recommended for areas with hard water or high total dissolved solids (50 mg/litre TDS).
- + Entry ports – for cable access to monitoring equipment or power induction.
- + Special racking – to support components/samples in test areas as required.

All cabinets are CE marked and have calibration traceable to international standards. Certificates of Conformity are supplied on request. Due to continuous development we reserve the right to introduce improvements and /or modify specifications without prior notice.



Humidity Cabinets

Designed to reproduce test conditions of high humidity.

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C&W humidity cabinets are designed to reproduce test conditions of high humidity at constant or cycling temperatures.

The test chamber environment is created by water being heated to precise temperatures to generate the production of water vapour. The water vapour saturates the air in the test area which is constantly being circulated by the internal fan to ensure even distribution. The test panels or components are enveloped in the moisture enriched air, allowing the water to be absorbed by the coating and oxidising with the base metal resulting in either blistering of the coating or the formation of red rust or oxidation on a non-ferrous metal. This test is used to reproduce the exposure to naturally occurring condensation or by cycling the temperature, in the cabinet dew formation can be produced. Pioneering designs have made C&W the UK leader in the manufacture of accelerated corrosion and environmental test cabinets.

With the inclusion of C&W in TQC Sheen in 2019 it is our goal to enhance this leading position and extend the product range with all necessary tools for performing corrosion tests.



Air movement either fan assisted or by convection.



"Soft Touch" waterproof membrane keypad control panel.

Operating Modes

C&W humidity cabinets provide a wide range of environmental test conditions:

- ✓ Any constant temperature between 30°C and 80°C. +/- 1°C accuracy.
- ✓ Cyclic temperatures, step-up / step-down over time.
- ✓ Constant high humidity – 95% to 100% saturated.

Precise Control

C&W humidity cabinets are designed for ease of operation. Their comprehensive package of control and display features ensures that all cycles, events and functions can be closely monitored.

- ✓ Microprocessor controller with seven-programme memory.
- ✓ Full digital display of test conditions.
- ✓ Low water sensor protection.
- ✓ Air circulation by internal fan ensures uniform test conditions.
- ✓ Time cycle facility for precise test duration control.
- ✓ NTC temperature sensor for precise control.
- ✓ Over temperature safety cut out system.

Standards

C&W CCT cabinets conform to all leading corporate, national and international standards including:

British/ISO/EN Standards:

BS 3900 F2, BS 3900 F9, BS 3900 F15, ISO 6270, ISO 11503, EN 1096

German Standards:

DIN 50517

American Standards:

ASTM D4585, ASTM D2247, INS 30.16.08,

Corporate Standards:

Ford, GM, Honda, Nissan, Toyota, Volvo, Jaguar, Renault, VW, VG.95210, VG, 95332.



Warranty

Subject to agreed maintenance procedures a two year warranty is available. The standard warranty is one year.



Fully automatic liquid level control of humidifier reservoir.



Low maintenance - high quality.

Design Benefits

C&W humidity cabinets - clean functional design with high specification components

- ✓ Ergonomically designed control panel.
 - ✓ Fire retardant GRP plastic structure with high chemical, water and temperature tolerance.
 - ✓ Standard panel racks included, options available.
- ✓ Wet seal apex roof, insulated or transparent.
 - ✓ Corrosion resistant throughout.

Humidity Function

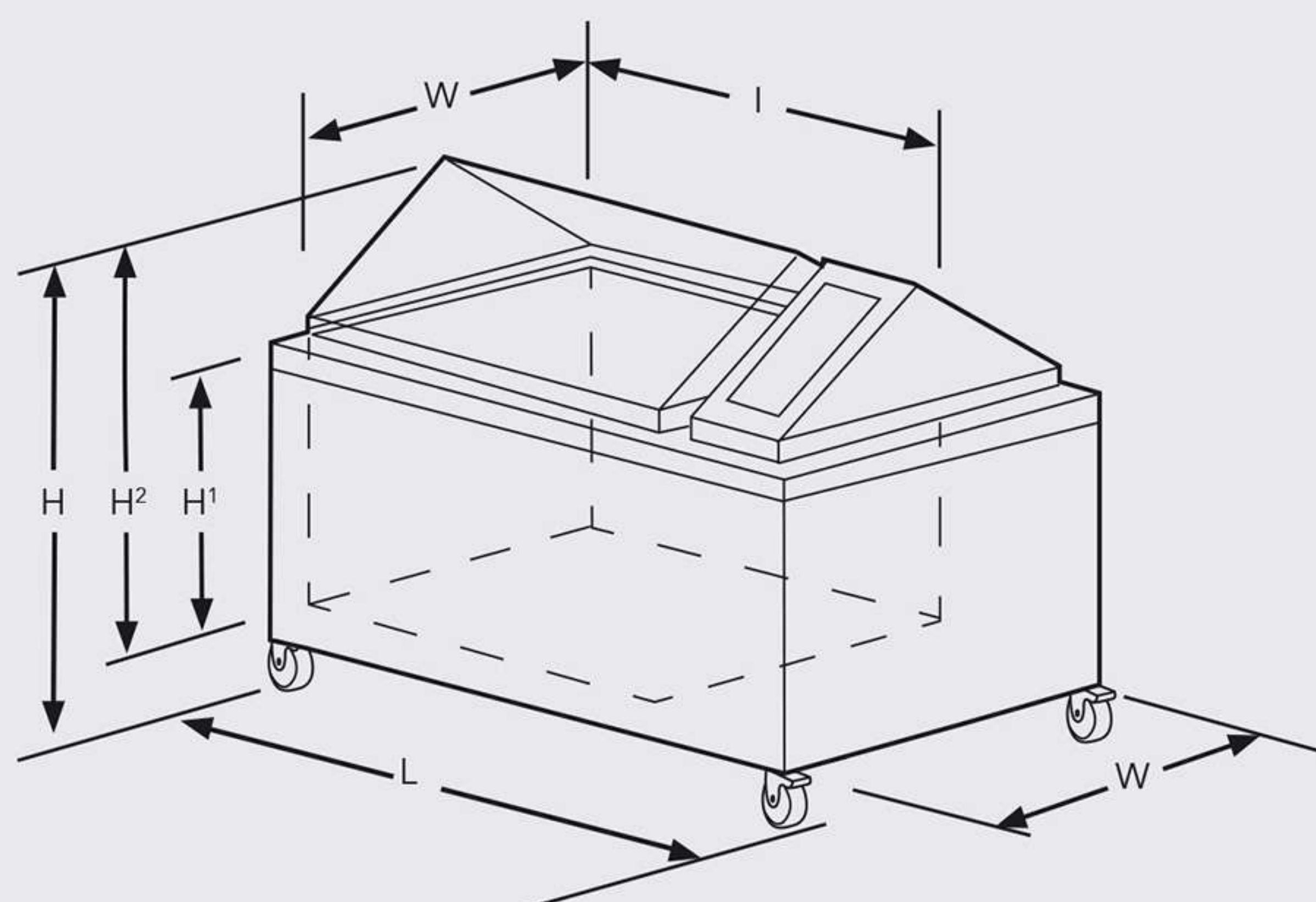
Humidity cabinets are dedicated cabinets only allowing humidity testing. But you can also obtain a standard corrosion test with humidity function added. This option is available for the following models:

Humidity and Humidity Mebon prohesion

Volume	SF/AB	SF/AB/MP
100	CW1701	CW1801
200	CW1702	CW1802
450	CW1704	CW1804
750	CW1707	CW1807
1000	CW1710	CW1810
2000	CW1720	-







Technical Specifications

Models	CW1301 100 litre	CW1302 200 litre	CW1304 450 litre	CW1307 750 litre	CW1310 1000 litre	CW1320 2000 litre
External Dimensions	L	1000 mm	1030 mm	1370 mm	1740 mm	2750 mm
	W	600 mm	700 mm	930 mm	1230 mm	1220 mm
	H	645 mm	1035 mm	1115 mm	1365 mm	1630 mm
Internal Dimensions	I	600 mm	610 mm	825 mm	1120 mm	2000 mm
	W	450 mm	510 mm	635 mm	870 mm	1000 mm
	H ¹	375 mm	455 mm	620 mm	780 mm	850 mm
	H ²	565 mm	660 mm	875 mm	1070 mm	1175 mm
Panel Capacity	72	80	132	210	344	516
Power Supply Amp	13	13	12	13	20	32
Style	TableTop	Floor Mounted				



Power Supply	230 V 50/60Hz single phase, other voltages on request
Water Type	De-ionised or mains water below 50 mg/litre TDS
Water Pressure	2 to 4 bar (30 to 60 psi)
Drain	36 mm outside diameter plastic pipe to liquid waste

Optional Extras

-  Continuous paper temperature recorder.
-  Entry ports for sensors, air or power connections.
-  Sample racks, sample rods and spiked racks designed to customer requirements with slots cut to any width, vertical, 6 degrees or 15 degrees.
-  Air purge facility for cabinet ventilation as BS 3900 F15.
-  Slotted apex roof for ISO 6270 - BS 3900 F9 testing.
-  Water temperature controller with submerged sensor to ISO 6270.

All cabinets are CE marked and have calibration traceable to international standards. Certificates of Conformity are supplied on request. Due to continuous development we reserve the right to introduce improvements and /or modify specifications without prior notice.



Humidity Conditioning Cabinets

Designed to meet environmental testing requirements.

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C&W cabinets are designed to meet the environmental testing requirements of the paint, plastic, packaging, paper, board, electronic, automotive, aerospace, military, textile and telecommunications industries.

The units function as variable humidity, temperature humidity, environmental, climatic or conditioning cabinets. Temperature and humidity testing and product conditioning is of vital importance to the research chemist, development engineer and quality assurance manager to ensure the product is researched, developed and manufactured to a standard guaranteed to survive the environment for which it is designed. Pioneering designs have made C&W the UK leader in the manufacture of accelerated corrosion and environmental test cabinets.

With the inclusion of C&W in TQC Sheen in 2019 it is our goal to enhance this leading position and extend the product range with all necessary tools for performing corrosion tests.



Step-up-step-down programming facility of both temperature and humidity in a single program.



Full digital display of test chamber temperature and humidity level.

Standard Features

- ✓ Programme Control: The microprocessor controller has the capacity to store up to seven different test methods.
- ✓ Variable speed peristaltic pump for delivery of de-ionised water to humidification system via flowmeter.
- ✓ Freestanding condenser unit housing, air heater, cooling/conditioning coil and humidification system - fan assisted.
- ✓ NTC temperature sensor and independent capacitive RH sensor with micro membrane filter.
- ✓ Independent water reservoir supply tank with low water audible alarm.
- ✓ Automatic conditioned air injection by forced air circulation.

Standards

C&W CCT cabinets conform to all leading corporate, national and international standards including:

British/ISO/EN Standards:

ISO 7253, BS 3900 F12

German Standards:

DIN 50021

American Standards:

ASTM B117

Japanese Standards:

JIS-K 5622-7

Corporate Standards:

Toyota TSH 1555G, Ford EU B 153-2, VDA 624-415, VW-1210-C, Renault, SWAAT + Mastmaasis Honda 5100Z, , GM 9540 P, Nissan M0007, CCT I, II & IV, Unichem 692 & 741.



Warranty

Subject to agreed maintenance procedures a two year warranty is available. The standard warranty is one year.



'Soft Touch' waterproof membrane keypad control panel



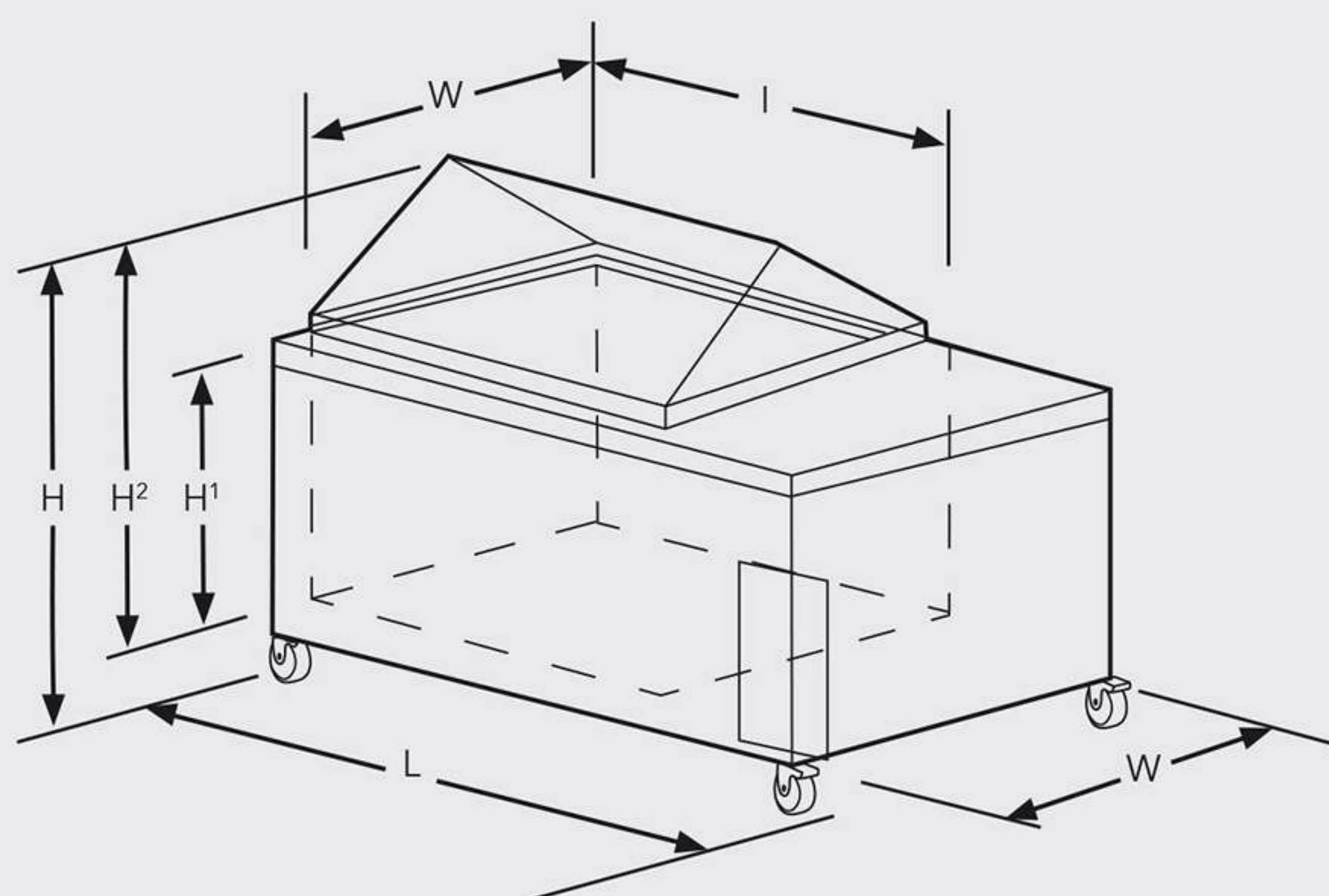
Humidity generator/condenser unit supplied on castors linked to the cabinet by a Ø 100 mm flexible flow and return ducting.

Design Features

- ✓ Maximum internal volume use with top loading access.
- ✓ Direct humidification system from vapour generator.
- ✓ Installation in areas of restricted access is made easier due to the compact design aided by wheels and removable lids.
- ✓ Additional uniform around cabinet heating.
- ✓ Insulated cabinet – fast recovery time – fast conditioning.
- ✓ Low maintenance-high quality.

Technical Specifications

Models	CW1602 200 litre	CW1604 450 litre	CW1607 750 litre	CW1610 1000 litre	CW1620 2000 litre
External Dimensions	L	1030 mm	1370 mm	1740 mm	2750 mm
	W	700 mm	930 mm	1230 mm	1220 mm
	H	1035 mm	1115 mm	1395 mm	1630 mm
Internal Dimensions	I	610 mm	825 mm	1120 mm	2000 mm
	W	510 mm	635 mm	870 mm	1000 mm
	H ¹	455 mm	620 mm	720 mm	850 mm
	H ²	660 mm	875 mm	1065 mm	1175 mm
Panel Capacity	80	132	210	344	516
Power Supply Amp	16	16	16	32	3 Phase 380 V 50/60Hz



Style	Floor Mounted
Condenser Unit	Floor Mounted Unit to stand next to test cabinet connected by two flexible hoses. Condenser dimensions: 700 mm x 1150 mm x 540 mm (LxWxH)
Power Supply	230 V 50/60Hz single phase, other voltages on request
Water Type	De-ionised or mains water below 50 mg/litre TDS
Water Pressure	2 to 4 bar (30 to 60 psi)
Drain	36 mm outside diameter plastic pipe to liquid waste
Reservoir With Lid	Supplied on castors with internal solution filter 500 mm x 620 mm x 540 mm (L x W x H)

Optional Extras

- + Sample racks, sample rods and spiked racks, designed to customer requirements.
- + Continuous chart temperature and humidity recorder.
- + Entry ports for sensors, air or power connections.
- + Transparent apex roof unit.

All cabinets are CE marked and have calibration traceable to international standards. Certificates of Conformity are supplied on request. Due to continuous development we reserve the right to introduce improvements and /or modify specifications without prior notice.



Salt Spray Corrosion Test Cabinets

Test both components and
coated test panels across the
whole spectrum of industry.

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C&W cabinets are widely used to test both components and coated test panels across the whole spectrum of industry. The design ensures that they meet or exceed the requirements laid down in all major national, international and corporate standards. Pioneering designs have made C&W the UK leader in the manufacture of accelerated corrosion and environmental test cabinets.

With the inclusion of C&W in TQC Sheen in 2019 it is our goal to enhance this leading position and extend the product range with all necessary tools for performing corrosion tests.

The C&W Corrosion Test Cabinets are designed to continuously deliver the precise environmental test conditions demanded by modern industry. Through their reliability, ease of operation and robust construction, C&W salt spray cabinets have gained worldwide acceptance with applications in all major sectors of automotive manufacture as well as the paint, surface and coatings, chemical, electronics, aerospace, military and offshore industries.



Sophisticated lucite atomiser for baffle free mist generation ensuring precise fallout throughout the chamber.



Accurate salt solution flow control via a variable speed, heavy duty peristaltic pump and flowmeter. This ensures precise collection rates and eliminates blockage.

Optimum Operation

Effective corrosion testing requires close operational control and total accuracy. In C&W's salt spray cabinets these criteria are assured by:

- ✓ Easy access for filling and sterilisation to prevent excessive growth of algae.
- ✓ Mobile External Salt Solution Reservoir with integral filter systems. 114 litre capacity, giving up to 14 days continuous operation depending on model size.
- ✓ Air regulator and gauge to control and monitor the air pressure required for precise salt spray distribution.
- ✓ Flowmeter to accurately monitor salt solution flow.
- ✓ Sample Racks are supplied as standard to accept panels or suspend samples.
- ✓ Optional low level alarm system available.

Precise Control

- ✓ Cabinet temperature control: "Soft touch" waterproof membrane keypad control panel with user friendly tactile keypads giving full digital test display.
- ✓ Range ambient to 55°C. +/- 1°C.
- ✓ Temperature Control by N.T.C. Sensor.
- ✓ Humidifier: Automatic self-filling humidifier tower for compressed air saturation and heating with digital display of temperature set point. Range: Ambient to 65°C +/-1°C. Tower includes incoloy heater, over temperature protection and air diffusers to create bubble formation of air within the tower to produce totally saturated and heated air. With low water level protection.
- ✓ Programme Control: The microprocessor controller has the capacity to store up to seven different test programmes.
- ✓ Cycle run and cycle left counter with end of test facility.
- ✓ Intermittent test facility for spray/dry/air purge cycles.
- ✓ Fully adjustable salt spray/dry cycles from continuous and 0 to 9999 minutes.
- ✓ Air Purge: to remove corrosive air borne salt prior to sample inspection. This can be done manually or it can be included in a program to work automatically.

Standards

British/ISO/EN Standards:

EN-ISO 7253, BS 3900 F12, BS 3900 F4, BS 2011 Part2:1 ka,
EN 60068.2-52 kb, BS 5466, BS 7479, BS 3900 F18, ISO 20340, ISO
11 997, ISO 9227, ISO 3768.

German Standards:

DIN 50021, VG 95332/4, VG 95210/2

American Standards:

ASTM B117, ASTM D5894, ASTM G85 (1,2,3+5), ASTM B368,
SAE J2334

French Standards:

NFX 41-002, CT. UOI OIA, NFA 91-101, PNX 14-002

Japanese Standards:

JIS Z 2371, JIS H 8502, JASCO M 6009

Corporate Standards:

Ford, Jaguar, Land Rover, G.M, Toyota, Honda, Nissan, Renault,
Peugeot, Citroen, Volvo, VW, Audi, BMW



Warranty

Subject to agreed maintenance procedures a two year warranty is available. The standard warranty is one year.



Corrosion resistant construction throughout.



Low maintenance - high quality.

Design Benefits

All C&W cabinets with their clean , functional design are manufactured from high quality materials selected specifically for this application:

- ✓ Specially formulated fire retardant glass reinforced polyester (GRP) with high chemical and temperature tolerance – ivory white in colour.
- ✓ Apex lids are formed in a range of composite materials depending on test requirements and supported by gas springs to ensure smooth operation and an effective seal when closed. Fully insulated.
- ✓ Ergonomically designed control panel.
- ✓ Over-temperature protection – factory set.
- ✓ Installation in areas of restricted access is made easier due to the compact design aided by wheels and removable lids.

Cabinet Variants

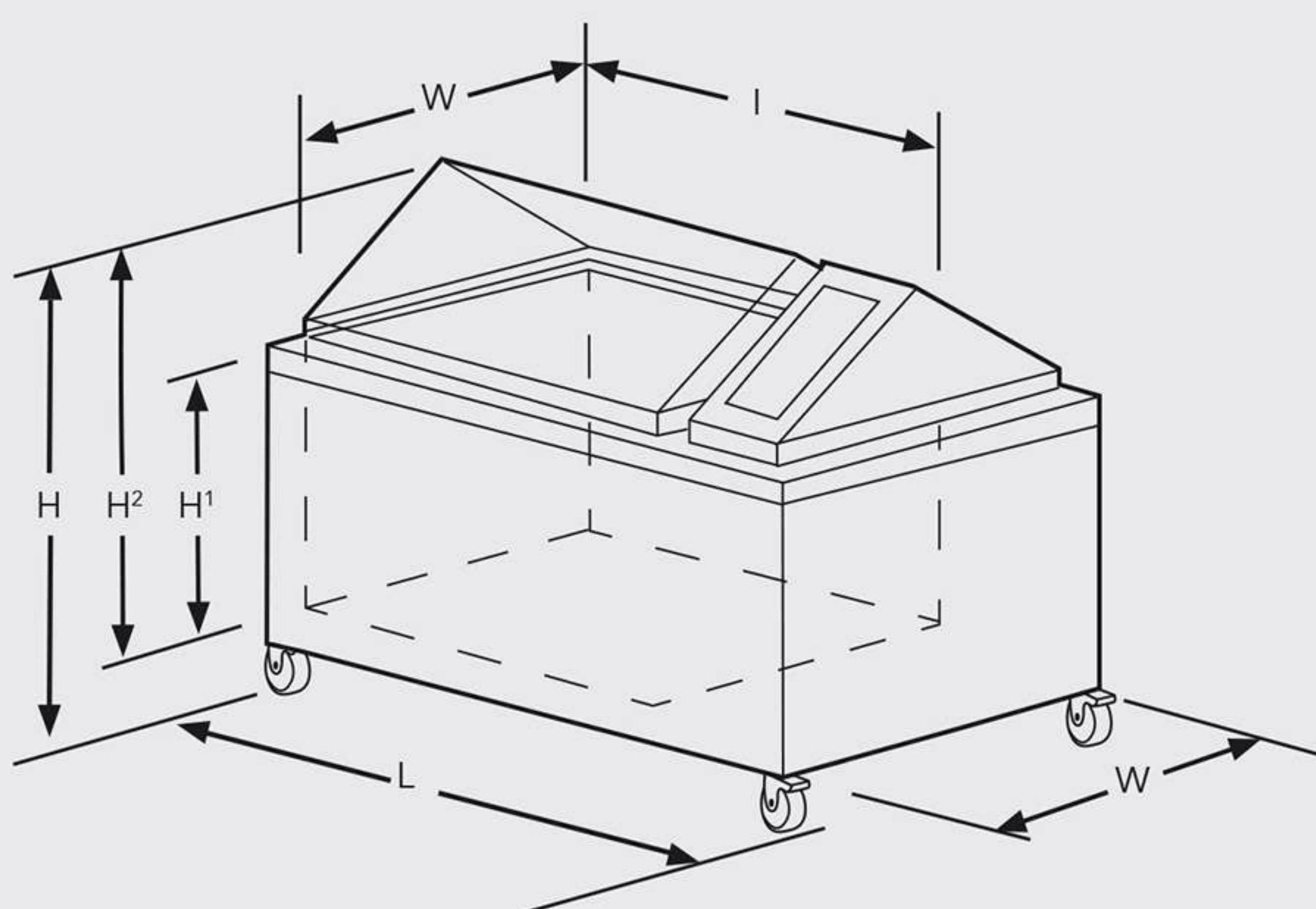
C&W manufactures a wide range of corrosion cabinets including conventional salt spray cabinets, cyclic prohesion cabinets, CASS cabinets, combination salt spray/humidity cabinets and combination salt spray/ prohesion-humidity cabinets.

- ▶ **Combination salt spray/cyclic prohesion cabinets**
These cabinets perform both standard salt spray and cyclic Prohesion® functions independently, an ideal solution when space is at a premium and test requirements do not justify separate test cabinets for each function.
- ▶ **CASS Cabinets**
Developed to carry out all standard salt spray and high temperature CASS tests typically employed when corrosion testing chrome plating on steel and plastic.
- ▶ **Prohesion®**
Prohesion® cabinets, originally developed by C&W, simulate natural weathering and provide a realistic method of accelerated corrosion testing for heavy duty industrial, marine and structural steel coatings.
- ▶ **Combination salt spray/humidity cabinets**
This variant operates as a standard salt spray cabinet but with the added benefit that it can be switched on to operate as a humidity cabinet. When in the salt spray mode all given standards can be achieved. In humidity mode the cabinet will operate between 30°C and 80°C with a constant RH of 95-100% saturation.



Technical Specifications

Models	CW1001 100 litre	CW1002 200 litre	CW1004 450 litre	CW1007 750 litre	CW1010 1000 litre	CW1020 2000 litre
External Dimensions	L	1000 mm	1030 mm	1370 mm	1740 mm	2750 mm
	W	600 mm	700 mm	930 mm	1230 mm	1220 mm
	H	645 mm	1035 mm	1115 mm	1365 mm	1630 mm
Internal Dimensions	I	600 mm	610 mm	825 mm	1120 mm	2000 mm
	W	450 mm	510 mm	635 mm	870 mm	1000 mm
	H ¹	375 mm	455 mm	620 mm	720 mm	850 mm
	H ²	565 mm	660 mm	875 mm	1065 mm	1175 mm
Panel Capacity	72	80	132	210	344	516
Power Supply Amp	13	13	13	13	20	3 Phase 380 V 50/60Hz
Style	Bench Mounted	Floor Mounted				
Compressed Air	Type: Clean, dry, oil free Pressure: 2 to 4 bar (30 to 60 psi)		Flow: 3.5cfm at 15 psi Connection: 10 mm ID plastic pipe			6 to 8 bar (90 to 120 psi)



Power Supply	230 V 50/60Hz single phase, other voltages on request
Water Type	De-ionised or mains water below 50mg/litre TDS
Water Pressure	2 to 4 bar (30 to 60 psi)
Water Connection	10 mm ID plastic pipe
Drain	36 mm outside diameter plastic pipe to liquid waste with air breather / vent pipe connected
Reservoir With Lid	Supplied on castors with internal solution filter 500 mm x 620 mm x 540 mm (L x W x H)

Optional Accessories

- + Compressor switch – for automatic switch-over to stand-by or regular air supply.
- + Entry ports – for cable access to monitoring equipment or power induction.
- + External salt fog collection vessels.
- + Compressor – available for continuous use or stand-by function: high specification, oil free.
- + De-Ioniser & water filters – recommended for areas with hard water or high total dissolved solids (50mg/litre TDS).
- + Special racking – to support components/samples in test areas as required.
- + Low reservoir alarm.
- + Salt fog condenser venting system.

All cabinets are CE marked and have calibration traceable to international standards. Certificates of Conformity are supplied on request. Due to continuous development we reserve the right to introduce improvements and /or modify specifications without prior notice.